1. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

   No more than 6 units from the number -6.

   A. $(-\infty, -12] \cup [0, \infty)$

   B. $(-\infty, -12) \cup (0, \infty)$

   C. $[-12, 0]$

   D. $(-12, 0)$

   E. None of the above

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2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

   $$-5x + 7 \geq 5x - 3$$

   A. $(-\infty, a]$, where $a \in [-2.6, -0.6]$

   B. $(-\infty, a]$, where $a \in [0.6, 2.6]$

   C. $[a, \infty)$, where $a \in [0, 3.1]$

   D. $[a, \infty)$, where $a \in [-1.5, -0.3]$

   E. None of the above.

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3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

   $$-7 - 4x \leq \frac{-27x - 4}{8} < -3 - 4x$$

   A. $(-\infty, a) \cup [b, \infty)$, where $a \in [9, 13.5]$ and $b \in [3, 10.5]$

   B. $[a, b)$, where $a \in [6.75, 12.75]$ and $b \in [0.75, 8.25]$

   C. $(a, b]$, where $a \in [9, 12.75]$ and $b \in [3, 5.25]$

   D. $(-\infty, a] \cup (b, \infty)$, where $a \in [8.25, 12]$ and $b \in [3, 9.75]$

E. None of the above.

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4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 + 5x > 6x \text{ or } -8 + 9x < 11x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, -3.75]$ and $b \in [-4.5, -2.25]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9, -5.25]$ and $b \in [-5.25, -1.5]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [0, 4.5]$ and $b \in [5.25, 12]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.25, 5.25]$ and $b \in [3.75, 9.75]$

E. $(-\infty, \infty)$

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5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{10}{3} - \frac{4}{2}x > \frac{7}{6}x - \frac{8}{4}$$

A. $(-\infty, a)$, where $a \in [-4.5, 0.75]$

B. $(-\infty, a)$, where $a \in [-0.75, 2.25]$

C. (a, ∞), where $a \in [0.75, 2.25]$

D. (a, ∞), where $a \in [-5.25, 0.75]$

E. None of the above.

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6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-8}{5} - \frac{10}{7}x > \frac{-5}{9}x + \frac{4}{8}$$

A. $(-\infty, a)$, where $a \in [0.75, 3.75]$

B. $(-\infty, a)$, where $a \in [-6, -1.5]$

C. (a, ∞), where $a \in [1.5, 6.75]$

D. (a, ∞), where $a \in [-7.5, 0.75]$

E. None of the above.

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 + 4x > 5x \text{ or } 8 + 4x < 5x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-7.35, -5.33]$ and $b \in [7.2, 10.5]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-9.3, -7.95]$ and $b \in [5.02, 7.42]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-8.81, -7.65]$ and $b \in [6.46, 7.14]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.34, -6.47]$ and $b \in [7.07, 8.38]$

E. $(-\infty, \infty)$

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8. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 6 units from the number 4.

A. $(-2, 10)$

B. $(-\infty, -2) \cup (10, \infty)$

C. $(-\infty, -2] \cup [10, \infty)$

D. $[-2, 10]$

E. None of the above

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9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$8 - 9x < \frac{-22x - 5}{4} \leq 8 - 6x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [0, 6.75]$ and $b \in [12, 21.75]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-1.5, 5.25]$ and $b \in [16.5, 21]$

C. $(a, b]$, where $a \in [2.25, 5.25]$ and $b \in [18, 20.25]$

D. $[a, b)$, where $a \in [-0.75, 6.75]$ and $b \in [17.25, 23.25]$

E. None of the above.

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10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4x - 5 \leq 9x + 3$$

A. $[a, \infty)$, where $a \in [-1.05, -0.12]$

B. $(-\infty, a]$, where $a \in [-2.84, 0.51]$

C. $(-\infty, a]$, where $a \in [0.12, 0.84]$

D. $[a, \infty)$, where $a \in [-0.01, 1.34]$

E. None of the above.
